

SEQUENCE@LISTING

<110> ASAHIKASEI KOGYO KABUSIKI KAISHA

<120> Antibodies for Detecting Microorganisms

<130> ASAHI-2

<150> JP 10/230204

<151> 1998-7-31

<160> 22

<210> 1

<211> 369

<212> DNA

<213> Haemophilus influenzae

<400> 1

atg tca tta act aac gaa caa atc att gaa gcg att gct tca aaa act	48
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gta act gaa atc gtt gaa tta atc gca gcg atg gaa gaa aaa ttc ggt	96
Val Thr Glu Ile Val Glu Leu Ile Ala Ala Met Glu Glu Lys Phe Gly	
20 25 30	
gtt tca gca gcg gca gca gta gca gca gct cca gca gca ggc ggt gca	144
Val Ser Ala Ala Ala Val Ala Ala Ala Pro Ala Ala Gly Gly Ala	
35 40 45	
gcg gca gca gaa gaa aaa act gaa ttc gac gtt gta ctt aaa tct gca	192
Ala Ala Ala Glu Glu Lys Thr Glu Phe Asp Val Val Leu Lys Ser Ala	
50 55 60	
ggt gcg aac aaa gta gca gta att aaa gca gta cgt ggt gca act ggt	240
Gly Ala Asn Lys Val Ala Val Ile Lys Ala Val Arg Gly Ala Thr Gly	
65 70 75 80	
tta ggc tta aaa gaa gct aaa gat tta gtt gaa tct gct cca gct aac	288
Leu Gly Leu Lys Glu Ala Lys Asp Leu Val Glu Ser Ala Pro Ala Asn	
85 90 95	
tta aaa gaa ggc gtt tct aaa gaa gaa gct gaa gca ctt aag aaa gaa	336
Leu Lys Glu Gly Val Ser Lys Glu Glu Ala Glu Ala Leu Lys Lys Glu	
100 105 110	
tta gaa gaa gcg ggt gca gaa gta gaa gtt aaa	369
Leu Glu Glu Ala Gly Ala Glu Val Glu Val Lys	
115 120	

<210> 2

<211> 123

<212> PRT

<213> Haemophilus influenzae

<400> 2

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Met Ser Leu Thr Asn Glu Gln Ile Ile Glu Ala Ile Ala Ser Lys Thr
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Val Thr Glu Ile Val Glu Leu Ile Ala Ala Met Glu Glu Lys Phe Gly
 20           25           30
Val Ser Ala Ala Ala Ala Val Ala Ala Ala Pro Ala Ala Gly Gly Ala
 35           40           45
Ala Ala Ala Glu Glu Lys Thr Glu Phe Asp Val Val Leu Lys Ser Ala
 50           55           60
Gly Ala Asn Lys Val Ala Val Ile Lys Ala Val Arg Gly Ala Thr Gly
 65           70           75           80
Leu Gly Leu Lys Glu Ala Lys Asp Leu Val Glu Ser Ala Pro Ala Asn
 85           90           95
Leu Lys Glu Gly Val Ser Lys Glu Glu Ala Glu Ala Leu Lys Lys Glu
100           105           110
Leu Glu Glu Ala Gly Ala Glu Val Glu Val Lys
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<210> 3

<211> 375

<212> DNA

<213> Helicobacter pylori

<400> 3

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atg gca att tca aaa gaa gaa gtg tta gag tat att ggt tca ttg agc      48
Met Ala Ile Ser Lys Glu Glu Val Leu Glu Tyr Ile Gly Ser Leu Ser
 1           5           10           15

gtt tta gag ctt tct gaa ttg gtt aaa atg ttt gag gaa aaa ttt ggc      96
Val Leu Glu Leu Ser Glu Leu Val Lys Met Phe Glu Glu Lys Phe Gly
 20           25           30

gtg agc gcg act cca acg gtc gta gcg ggt gcg gct gta gct ggc ggt      144
Val Ser Ala Thr Pro Thr Val Val Ala Gly Ala Ala Val Ala Gly Gly
 35           40           45

gca gcg gct gag agc gaa gaa aaa acc gaa ttt aat gtg att ttg gcc      192
Ala Ala Ala Glu Ser Glu Glu Lys Thr Glu Phe Asn Val Ile Leu Ala
 50           55           60

gat agc ggt gct gaa aaa att aag gtg att aaa gtg gtt cgt gaa atc      240
Asp Ser Gly Ala Glu Lys Ile Lys Val Ile Lys Val Val Arg Glu Ile
 65           70           75           80

act gga ctt ggc ctg aaa gaa gct aaa gac gct acc gaa aaa acc cct      288
Thr Gly Leu Gly Leu Lys Glu Ala Lys Asp Ala Thr Glu Lys Thr Pro
 85           90           95

cat gtg ctt aaa gag ggc gtg aat aaa gaa gaa gct gaa acc atc aag      336
His Val Leu Lys Glu Gly Val Asn Lys Glu Glu Ala Glu Thr Ile Lys
100           105           110
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375

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<400> 4
Met Ala Ile Ser Lys Glu Glu Val Leu Glu Tyr Ile Gly Ser Leu Ser
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Val Leu Glu Leu Ser Glu Leu Val Lys Met Phe Glu Glu Lys Phe Gly
          20             25             30
Val Ser Ala Thr Pro Thr Val Val Ala Gly Ala Ala Val Ala Gly Gly
          35             40             45
Ala Ala Ala Glu Ser Glu Glu Lys Thr Glu Phe Asn Val Ile Leu Ala
          50             55             60
Asp Ser Gly Ala Glu Lys Ile Lys Val Ile Lys Val Val Arg Glu Ile
65             70             75             80
Thr Gly Leu Gly Leu Lys Glu Ala Lys Asp Ala Thr Glu Lys Thr Pro
          85             90             95
His Val Leu Lys Glu Gly Val Asn Lys Glu Glu Ala Glu Thr Ile Lys
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Lys Lys Leu Glu Glu Val Gly Ala Lys Val Glu Val Lys
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<210> 5
<211> 366
<212> DNA
<213> Streptococcus pneumoniae
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aaa gaa ggc gtt gca act gca gaa gct gaa gaa atc aaa gct aaa ttg 336
Lys Glu Gly Val Ala Thr Ala Glu Ala Glu Glu Ile Lys Ala Lys Leu
100 105 110

gaa gaa gct gga gct tca gtt act ctt aaa 366
Glu Glu Ala Gly Ala Ser Val Thr Leu Lys
115 120

<210> 6
<211> 122
<212> PRT
<213> Streptococcus pneumoniae

<400> 6
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Val Thr Ala Ala Ala Pro Val Ala Val Ala Ala Asp Ala Ala Asp
35 40 45
Ala Gly Ala Ala Lys Asp Ser Phe Asp Val Glu Leu Thr Ser Ala Gly
50 55 60
Asp Lys Lys Val Gly Val Ile Lys Val Val Arg Glu Ile Thr Gly Leu
65 70 75 80
Gly Leu Lys Glu Ala Lys Glu Leu Val Asp Gly Ala Pro Ala Leu Val
85 90 95
Lys Glu Gly Val Ala Thr Ala Glu Ala Glu Glu Ile Lys Ala Lys Leu
100 105 110
Glu Glu Ala Gly Ala Ser Val Thr Leu Lys
115 120

<210> 7
<211> 369
<212> DNA
<213> Neisseria gonorrhoeae

<400> 7
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1 5 10 15

gta atg gaa ttg aat gac ctg gtt aaa gct ttt gaa gaa aaa ttc ggt 96
Val Met Glu Leu Asn Asp Leu Val Lys Ala Phe Glu Glu Lys Phe Gly
20 25 30

gtt tct gct gct gct gtt gca gtt gca ggt cct gct ggt gcc ggt gct 144
Val Ser Ala Ala Ala Val Ala Val Ala Gly Pro Ala Gly Ala Gly Ala
35 40 45

gcc gat gct gaa gaa aaa acc gaa ttt gat gtc gtt ttg gct tct gcc 192
Ala Asp Ala Glu Glu Lys Thr Glu Phe Asp Val Val Leu Ala Ser Ala

50	55	60	
ggc gat caa aaa gtc ggc gtg att aaa gtt gtc cgt gca att act ggt			240
Gly Asp Gln Lys Val Gly Val Ile Lys Val Val Arg Ala Ile Thr Gly			
65	70	75	80
ttg ggt ctg aaa gaa gct aaa gac atc gtt gac ggc gca cct aaa acc			288
Leu Gly Leu Lys Glu Ala Lys Asp Ile Val Asp Gly Ala Pro Lys Thr			
	85	90	95
att aaa gag ggt gtt tct aaa gct gaa gcc gaa gac atc caa aaa caa			336
Ile Lys Glu Gly Val Ser Lys Ala Glu Ala Glu Asp Ile Gln Lys Gln			
100	105	110	
ctg gaa gca gca ggc gct aaa gtc gaa atc aaa			369
Leu Glu Ala Ala Gly Ala Lys Val Glu Ile Lys			
115	120		

<210> 8
 <211> 123
 <212> PRT
 <213> Neisseria gonorrhoeae

<400> 8															
Met	Ala	Ile	Thr	Lys	Glu	Asp	Ile	Leu	Glu	Ala	Val	Gly	Ser	Leu	Thr
1				5				10					15		
Val	Met	Glu	Leu	Asn	Asp	Leu	Val	Lys	Ala	Phe	Glu	Glu	Lys	Phe	Gly
		20				25					30				
Val	Ser	Ala	Ala	Ala	Val	Ala	Val	Ala	Gly	Pro	Ala	Gly	Ala	Gly	Ala
	35				40			45							
Ala	Asp	Ala	Glu	Glu	Lys	Thr	Glu	Phe	Asp	Val	Val	Leu	Ala	Ser	Ala
50				55			60								
Gly	Asp	Gln	Lys	Val	Gly	Val	Ile	Lys	Val	Val	Arg	Ala	Ile	Thr	Gly
65			70				75				80				
Leu	Gly	Leu	Lys	Glu	Ala	Lys	Asp	Ile	Val	Asp	Gly	Ala	Pro	Lys	Thr
		85				90				95					
Ile	Lys	Glu	Gly	Val	Ser	Lys	Ala	Glu	Ala	Glu	Asp	Ile	Gln	Lys	Gln
	100					105				110					
Leu	Glu	Ala	Ala	Gly	Ala	Lys	Val	Glu	Ile	Lys					
115						120									

<210> 9
 <211> 369
 <212> DNA
 <213> Neisseria meningitidis

<400> 9															
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1				5				10				15			
gta	atg	gaa	ttg	aac	gac	ttg	gtt	aaa	gct	ttt	gaa	gaa	aaa	ttc	ggt
Val	Met	Glu	Leu	Asn	Asp	Leu	Val	Lys	Ala	Phe	Glu	Glu	Lys	Phe	Gly
	20					25					30				

48

96

gtt tct gct gct gct gtt gca gtt gca ggt cct gct ggt gcc ggt gct 144
 Val Ser Ala Ala Ala Val Ala Val Ala Gly Pro Ala Gly Ala Gly Ala
 35 40 45

gcc gat gct gaa gaa aaa acc gaa ttt gat gtc gtt ttg gct tct gcc 192
 Ala Asp Ala Glu Glu Lys Thr Glu Phe Asp Val Val Leu Ala Ser Ala
 50 55 60

ggt gat caa aaa gtc ggc gtg att aaa gtt gtc cgt gca att acc ggt 240
 Gly Asp Gln Lys Val Gly Val Ile Lys Val Val Arg Ala Ile Thr Gly
 65 70 75 80

ttg ggt ctg aaa gaa gct aaa gac atc gtt gac ggt gca cct aaa acc 288
 Leu Gly Leu Lys Glu Ala Lys Asp Ile Val Asp Gly Ala Pro Lys Thr
 85 90 95

att aaa gag ggt gtt tct aaa gct gaa gcc gaa gac atc caa aaa caa 336
 Ile Lys Glu Gly Val Ser Lys Ala Glu Ala Glu Asp Ile Gln Lys Gln
 100 105 110

ctg gaa gaa gcc ggc gct aaa gtc gaa atc aaa 369
 Leu Glu Glu Ala Gly Ala Lys Val Glu Ile Lys
 115 120

<210> 10
 <211> 123
 <212> PRT
 <213> Neisseria meningitidis

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 20 25 30
 Val Ser Ala Ala Ala Val Ala Val Ala Gly Pro Ala Gly Ala Gly Ala
 35 40 45
 Ala Asp Ala Glu Glu Lys Thr Glu Phe Asp Val Val Leu Ala Ser Ala
 50 55 60
 Gly Asp Gln Lys Val Gly Val Ile Lys Val Val Arg Ala Ile Thr Gly
 65 70 75 80
 Leu Gly Leu Lys Glu Ala Lys Asp Ile Val Asp Gly Ala Pro Lys Thr
 85 90 95
 Ile Lys Glu Gly Val Ser Lys Ala Glu Ala Glu Asp Ile Gln Lys Gln
 100 105 110
 Leu Glu Glu Ala Gly Ala Lys Val Glu Ile Lys
 115 120

<210> 11
 <211> 31
 <212> DNA
 <213> artificial sequence

<220>

<223> The primers DNA for PCR used to acquire the ribosomal protein L7/L12 gene from *H. influenzae*.

<400> 11
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<210> 12

<211> 34

<212> DNA

<213> artificial sequence

<220>

<223> The primers DNA for PCR used to acquire the ribosomal protein L7/L12 gene from *H. influenzae*.

<400> 12
agcatctcga gatttaactt ctacttctgc accc 34

<210> 13

<211> 33

<212> DNA

<213> artificial sequence

<220>

<223> The primers DNA for PCR used to acquire the ribosomal protein L7/L12 gene from *S. pneumoniae*.

<400> 13
ggaaggatcc atggcattga acattgaaaa cat 33

<210> 14

<211> 33

<212> DNA

<213> artificial sequence

<220>

<223> The primers DNA for PCR used to acquire the ribosomal protein L7/L12 gene from *S. pneumoniae*.

<400> 14
tactctcgag tttaagagta actgaagctc cag 33

<210> 15

<211> 31

<212> DNA

<213> artificial sequence

<220>

<223> The primers DNA for PCR used to acquire the ribosomal protein L7/L12 gene from *N. gonorrhoeae*.

<400> 15
gtaaggatccü@atggctattaü@ctaaagaagaü@cü@ü@ü@31

<210> 16
 <211> 34
 <212> DNA
 <213> artificial sequence

<220>

<223> The primers DNA for PCR used to acquire the ribosomal protein L7/L12 gene from *N. gonorrhoeae*.

<400> 16
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<210> 17
 <211> 369
 <212> DNA
 <213> *Haemophilus influenzae*

<400> 17
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 1 5 10 15

gta act gaa atc gtt gaa tta atc gca gcg atg gaa gaa aaa ttc ggt 96
 Val Thr Glu Ile Val Glu Leu Ile Ala Ala Met Glu Glu Lys Phe Gly
 20 25 30

gtt tca gca gcg gca gca gta gca gca gct cca gca gca ggc ggt gca 144
 Val Ser Ala Ala Ala Val Ala Ala Ala Pro Ala Ala Gly Gly Ala
 35 40 45

gcg gca gca gaa gaa aaa act gaa ttc gac gtt gta ctt aaa tct gca 192
 Ala Ala Ala Glu Glu Lys Thr Glu Phe Asp Val Val Leu Lys Ser Ala
 50 55 60

ggt gcg aac aaa gta gca gta att aaa gca gta cgt ggt gca act ggt 240
 Gly Ala Asn Lys Val Ala Val Ile Lys Ala Val Arg Gly Ala Thr Gly
 65 70 75 80

tta ggc tta aaa gaa gct aaa gat tta gtt gaa tct gct cca gct aac 288
 Leu Gly Leu Lys Glu Ala Lys Asp Leu Val Glu Ser Ala Pro Ala Asn
 85 90 95

tta aaa gaa ggc gtt tct aaa gaa gaa gct gaa gca ctt aag aaa gaa 336
 Leu Lys Glu Gly Val Ser Lys Glu Glu Ala Glu Ala Leu Lys Lys Glu
 100 105 110

tta gaa gaa gcg ggt gca gaa gta gaa gtt aaa 369
 Leu Glu Glu Ala Gly Ala Glu Val Glu Val Lys
 115 120

<210> 18
 <211> 123
 <212> PRT
 <213> *Haemophilus influenzae*

<400> 18
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 20 25 30
 Val Ser Ala Ala Ala Val Ala Ala Pro Ala Ala Gly Gly Ala
 35 40 45
 Ala Ala Ala Glu Glu Lys Thr Glu Phe Asp Val Val Leu Lys Ser Ala
 50 55 60
 Gly Ala Asn Lys Val Ala Val Ile Lys Ala Val Arg Gly Ala Thr Gly
 65 70 75 80
 Leu Gly Leu Lys Glu Ala Lys Asp Leu Val Glu Ser Ala Pro Ala Asn
 85 90 95
 Leu Lys Glu Gly Val Ser Lys Glu Glu Ala Glu Ala Leu Lys Lys Glu
 100 105 110
 Leu Glu Glu Ala Gly Ala Glu Val Glu Val Lys
 115 120

<210> 19
 <211> 366
 <212> DNA
 <213> Streptococcus pneumoniae

<400> 19
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 1 5 10 15
 atc ctt gaa ttg aac gac ctt gta aaa gct atc gaa gaa gaa ttt ggt 96
 Ile Leu Glu Leu Asn Asp Leu Val Lys Ala Ile Glu Glu Glu Phe Gly
 20 25 30
 gta act gca gct gct cct gta gct gtt gct gca gct gat gca gct gat 144
 Val Thr Ala Ala Ala Pro Val Ala Val Ala Ala Ala Asp Ala Ala Asp
 35 40 45
 gct ggt gct gct aaa gat tca ttc gac gtt gaa ttg aca tct gca ggc 192
 Ala Gly Ala Ala Lys Asp Ser Phe Asp Val Glu Leu Thr Ser Ala Gly
 50 55 60
 gac aaa aaa gtt ggc gtt atc aaa gtt gta cgt gaa atc act ggt ctt 240
 Asp Lys Lys Val Gly Val Ile Lys Val Val Arg Glu Ile Thr Gly Leu
 65 70 75 80
 ggt ctt aaa gaa gct aaa gaa ctt gtt gac ggt gca cca gca ctt gtt 288
 Gly Leu Lys Glu Ala Lys Glu Leu Val Asp Gly Ala Pro Ala Leu Val
 85 90 95
 aaa gaa ggc gtt gca act gca gaa gct gaa gaa atc aaa gct aaa ttg 336
 Lys Glu Gly Val Ala Thr Ala Glu Ala Glu Glu Ile Lys Ala Lys Leu
 100 105 110
 gaa gaa gct gga gct tca gtt act ctt aaa 366

Glu Glu Ala Gly Ala Ser Val Thr Leu Lys
 115 120

<210> 20
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 <212> PRT
 <213> Streptococcus pneumoniae

<400> 20
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 Val Thr Ala Ala Ala Pro Val Ala Val Ala Ala Asp Ala Ala Asp
 35 40 45
 Ala Gly Ala Ala Lys Asp Ser Phe Asp Val Glu Leu Thr Ser Ala Gly
 50 55 60
 Asp Lys Lys Val Gly Val Ile Lys Val Val Arg Glu Ile Thr Gly Leu
 65 70 75 80
 Gly Leu Lys Glu Ala Lys Glu Leu Val Asp Gly Ala Pro Ala Leu Val
 85 90 95
 Lys Glu Gly Val Ala Thr Ala Glu Ala Glu Glu Ile Lys Ala Lys Leu
 100 105 110
 Glu Glu Ala Gly Ala Ser Val Thr Leu Lys
 115 120

<210> 21
 <211> 369
 <212> DNA
 <213> Neisseria gonorrhoeae

<400> 21
 atg gct att act aaa gaa gac att ttg gaa gca gtt ggt tct ttg acc 48
 Met Ala Ile Thr Lys Glu Asp Ile Leu Glu Ala Val Gly Ser Leu Thr
 1 5 10 15
 gta atg gaa ttg aat gac ctg gtt aaa gct ttt gaa gaa aaa ttc ggt 96
 Val Met Glu Leu Asn Asp Leu Val Lys Ala Phe Glu Glu Lys Phe Gly
 20 25 30
 gtt tct gct gct gct gtt gca gtt gca ggt cct gct ggt gcc ggt gct 144
 Val Ser Ala Ala Ala Val Ala Val Ala Gly Pro Ala Gly Ala Gly Ala
 35 40 45
 gcc gat gct gaa gaa aaa acc gaa ttt gat gtc gtt ttg gct tct gcc 192
 Ala Asp Ala Glu Glu Lys Thr Glu Phe Asp Val Val Leu Ala Ser Ala
 50 55 60
 ggc gat caa aaa gtc ggc gtg att aaa gtt gtc cgt gca att act ggt 240
 Gly Asp Gln Lys Val Gly Val Ile Lys Val Val Arg Ala Ile Thr Gly
 65 70 75 80
 ttg ggt ctg aaa gaa gct aaa gac atc gtt gac ggc gca cct aaa acc 288
 Leu Gly Leu Lys Glu Ala Lys Asp Ile Val Asp Gly Ala Pro Lys Thr

85

90

95

att aaa gag ggt gtt tct aaa gct gaa gcc gaa gac atc caa aaa caa
 Ile Lys Glu Gly Val Ser Lys Ala Glu Ala Glu Asp Ile Gln Lys Gln
 100 105 110

336

ctg gaa gca gca ggc gct aaa gtc gaa atc aaa
 Leu Glu Ala Ala Gly Ala Lys Val Glu Ile Lys
 115 120

369

<210> 22
 <211> 123
 <212> PRT
 <213> Neisseria gonorrhoeae

<400> 22
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 1 5 10 15
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 20 25 30
 Val Ser Ala Ala Ala Val Ala Val Ala Gly Pro Ala Gly Ala Gly Ala
 35 40 45
 Ala Asp Ala Glu Glu Lys Thr Glu Phe Asp Val Val Leu Ala Ser Ala
 50 55 60
 Gly Asp Gln Lys Val Gly Val Ile Lys Val Val Arg Ala Ile Thr Gly
 65 70 75 80
 Leu Gly Leu Lys Glu Ala Lys Asp Ile Val Asp Gly Ala Pro Lys Thr
 85 90 95
 Ile Lys Glu Gly Val Ser Lys Ala Glu Ala Glu Asp Ile Gln Lys Gln
 100 105 110
 Leu Glu Ala Ala Gly Ala Lys Val Glu Ile Lys
 115 120

20

1

/21